UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/685,306 | 10/14/2003 | Thomas L. Ritzdorf | 291958117US1 | 9845 |

25096 7590 05/01/2006

PERKINS COIE LLP
PATENT-SEA
P.O. BOX 1247
SEATTLE, WA 98111-1247

| EXAMINER | |
|---|---|
| STOCK JR, GORDON J | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2877 | |

DATE MAILED: 05/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/685,306 | RITZDORF ET AL. | |
| | Examiner | Art Unit | |
| | Gordon J. Stock | 2877 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *15 February 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-3,6-10,27,29-36,38-43 and 45-52* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *8,10,43 and 45-52* is/are allowed.

6)☒ Claim(s) *1,6,27,29-36 and 38-42* is/are rejected.

7)☒ Claim(s) *2,3,7 and 9* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *20060215*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

1. The Amendment received on February 15, 2006 has been entered into the record.

### *Information Disclosure Statement*

2. The information disclosure statement (IDS) submitted on February 15, 2006 is being considered by the examiner.

### *Double Patenting*

3. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

4. **Claims 27, 29-36, 38-42** are rejected under 35 U.S.C. 101 as claiming the same invention as that of **claims 29-42** of prior **U.S. Patent No. 6,747,734 to Ritzdorf et al.—previously cited.** This is a double patenting rejection.

**Claims 27, 29-35** are worded the same as **claims 29-36** of **Riztdorf (6,747,734)** except in regards to the metrology unit. **Claim 27** reads 'a metrology unit having a space for receiving a microelectronic workpiece, the metrology unit being configured to measure a condition of at least one conductive layer of the microelectronic workpiece and generate a condition signal representative of the condition, wherein the at least one conductive layer includes a generally continuous seed layer and wherein the metrology unit is configured to generate a condition signal representative of a thickness of the seed layer' which is differently worded but still defines the

same invention in regards to the metrology unit of **Ritzdorf ('734) claim 29** (see col. 20, lines 53-60). Please see MPEP 804 II. A.

**Claims 36, 38-42** are worded the same as **claims 37-42** of **Ritzdorf (6,747,734)** except in regards to the metrology unit. **Claim 36** reads 'a metrology unit having a space for receiving a microelectronic workpiece, the metrology unit being configured to measure a condition of at least one conductive layer of the microelectronic workpiece and generate a condition signal representative of the condition, wherein the at least one conductive layer includes a generally continuous seed layer and wherein the metrology unit is configured to generate a condition signal representative of a thickness of the seed layer' which is differently worded but still defines the same invention in regards to the metrology unit of **Ritzdorf ('734) claim 37** (see col. 21, lines 34-41). Please see MPEP 804 II. A.

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. **Claims 1 and 6** are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over **claims 3-4** of **U.S. Patent No. 6,747,734 to Ritzdorf et al.—previously cited.** Although the conflicting claims are not identical, they are not patentably distinct from each other because **claim 1 (10/685,306)** and **claim 3 ('734)** are both apparatus claims for processing a microelectronic workpiece, comprising an in-line metrology unit, a control that is signal-connected to the metrology unit, a process unit, a transport unit wherein the condition signal from the metrology unit to the control influences said process and is representative of a thickness of a seed layer applied onto the microelectronic workpiece. However, **claim 3 ('734)** does not explicitly state 'performing an electrochemical process,' but the process unit comprises an electroplating reactor (col. 17, line 4) and performs a material application process (col. 17, lines 2-3). Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made that the process unit performed an electrochemical process for the process comprises an electroplating reaction.

Although the conflicting claims are not identical, they are not patentably distinct from each other because **claim 6 (10/685,306)** and **claim 4 ('734)** are both apparatus claims for processing a microelectronic workpiece, comprising an in-line metrology unit, a control that is signal-connected to the metrology unit, a process unit comprising an electroplating reactor comprising a plurality of anodes and the control adjusts current between each anode and the cathode, a transport unit wherein the condition signal from the metrology unit to the control

influences said process and is representative of a thickness of a seed layer applied onto the microelectronic workpiece. However, **claim 4 ('734)** does not explicitly state 'performing an electrochemical process,' but the process unit comprises an electroplating reactor (col. 17, line 30) and performs a material application process (col. 17, line 28). Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made that the process unit performed an electrochemical process for the process comprises an electroplating reaction.

***Allowable Subject Matter***

7. **Claims 8, 10, 43, 45-52** are allowed.

**Claims 1 and 6** would be allowable if the nonstatutory double patenting rejection as set forth in this Office action is overcome.

**Claims 2, 3, 7, 9** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As to **claim 1**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a processing apparatus for processing a microelectronic workpiece the condition signal is representative of a thickness of a seed layer, in combination with the rest of the limitations of **claims 1-3, 6, 7, and 9.**

As to **claim 8**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a processing apparatus for processing a microelectronic workpiece the metrology unit is configured to measure a thickness of a seed layer and measure a thickness of a process layer deposited on the seed layer, in combination with the rest of the limitations of **claims 8 and 43.**

As to **claim 10,** the prior art of record, taken alone or in combination, fails to disclose or render obvious in a processing apparatus for processing a microelectronic workpiece the metrology unit is configured to measure a thickness of a seed layer and measure a thickness of a process layer deposited on the seed layer, in combination with the rest of the limitations of **claims 10, 45-52.**

*Response to Arguments*

8. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection. As for the allowable subject matter set forth in the previous action, the Examiner apologizes for the inconvenience, but upon further consideration of previously cited **U.S. Patent No. 6,747,734 to Ritzdorf et al.** the double patenting rejections were made for **claims 1, 6, 27, 29-36, 38-42** above.

*Fax/Telephone Numbers*

If the applicant wishes to send a fax dealing with either a proposed amendment or a discussion with a phone interview, then the fax should:

1) Contain either a statement "DRAFT" or "PROPOSED AMENDMENT" on the fax cover sheet; and

2) Should be unsigned by the attorney or agent.

This will ensure that it will not be entered into the case and will be forwarded to the examiner as quickly as possible.

*Papers related to the application may be submitted to Group 2800 by Fax transmission. Papers should be faxed to Group 2800 via the PTO Fax machine located in Crystal Plaza 4. The form of such papers must conform to the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CP4 Fax Machine number is:* **(571) 273-8300**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gordon J. Stock whose telephone number is (571) 272-2431. The examiner can normally be reached on Monday-Friday, 10:00 a.m. - 6:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr., can be reached at 571-272-2800 ext 77.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private Pair system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

gs
April 25, 2006

Gregory J. Toatley, Jr.
Supervisory Patent Examiner
Art Unit 2877
26 Apr 06